

What is claimed is:

1. A vector for amplifying a toxic gene in bacteria comprising:
an origin of replication;
a first promoter;
5 a polylinker;
a second promoter in reverse orientation with respect to said first promoter;
a polyadenylation signal; and
a nucleic acid molecule having a nucleotide sequence encoding a selectable marker;
wherein said second promoter is capable of producing an antisense molecule
10 directed to said toxic gene when said toxic gene is inserted into said polylinker of said
vector.
2. The vector of claim 1 wherein said vector is a plasmid, cosmid, phagemid or viral
vector.
3. The vector of claim 1 further comprising an enhancer upstream of said first
15 promoter.
4. The vector of claim 1 wherein said first promoter is selected from the group
consisting of B-cell specific promoter, baculovirus promoter, cytomegalovirus promoter,
SV40 early promoter, mouse mammary tumor virus promoter, long terminal repeat of
human immunodeficiency virus, maloney virus promoter, Epstein Barr virus promoter, and
20 rous sarcoma virus promoter.
5. The vector of claim 1 wherein said second promoter is a lac promoter.
6. The vector of claim 1 wherein said poly A signal is SV40 polyadenylation signal.
7. The vector of claim 1 wherein said gene encoding a selectable marker is
kanamycin, neomycin, chloramphenicol, ampicillin, or a genetic selection marker.

8. The vector of claim 3 wherein said enhancer is selected from the group consisting of rous sarcoma virus enhancer, human actin enhancer, human myosin enhancer, human hemoglobin enhancer, human muscle creatine enhancer, viral enhancers such as those from cytomegalovirus and Epstein-Barr virus, immunoglobulin enhancers, class II enhancers, and enhancers active in dendritic cells and macrophages.
9. The vector of claim 1 further comprising a nucleic acid molecule having a nucleotide sequence encoding a toxic protein, wherein said nucleic acid molecule is inserted within said polylinker and is operably connected to said first promoter.
10. The vector of claim 9 wherein said nucleic acid molecule encodes a bacterial toxin or a viral toxin.
11. The vector of claim 10 wherein said viral toxin is HIV-1 *env*.
12. The vector of claim 10 wherein said bacterial toxin is selected from the group consisting of Pseudomonas exotoxin A, cholera toxin, diphtheria toxin, *E. coli* toxins, botulinum toxin, anthrax toxin, pertussis toxin, shiga toxin, ricin, tetanus toxin, and Staphylococcal toxins.
13. A host cell comprising the vector of claim 1.
14. The host cell of claim 13 wherein said cell is a bacteria.
15. The host cell of claim 13 wherein said cell is a mammalian cell.
16. A method of amplifying a toxic gene in bacteria comprising the steps:
providing a vector of claim 1;
inserting the nucleic acid molecule encoding said toxic gene into the polylinker of said vector;
inserting said vector comprising said toxic gene into said bacteria; and

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amplifying said vector in said bacteria.

add as

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